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REMARKS

Reconsideration of the application and consideration of the following remarks is respectfully requested. Claims 1 to 30 are currently pending, and no claims have been amended.

The Final Office Action mailed April 14, 2003 addressed claims 1 to 30. Claims 1 to 30 were rejected.

Claims 1 to 6 and 8 to 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (US 5,820,489) in view of Cavallaro (US 5,688,191), Cavallaro (US 5,810,678) and Harris et al. (5,856,388). The Examiner stated that Sullivan discloses a golf ball having a core with a PGA compression of 45 to 85 (Riehle 115 to 75), a diameter of 1.54 to 1.545 inches, a cover layer containing a high acid ionomer with a Shore D hardness about 65 or greater and a thickness of 0.08 to 0.13 inches. The Examiner further stated that Sullivan does not disclose a mantle layer but one of ordinary skill in the art recognizes that a golf ball can be fabricated with a plurality of layers including a mantle layer which impacts playing characteristics. The Examiner further stated that Cavallaro '191 teaches that it is desirable to include a mantle layer which is believed to have an effect on the feel of the golf ball, and Cavallaro '678 also makes it clear that conventional two-piece balls provide maximum distance but the two piece balls have a "hard" feel when struck by a club, and it is desirable to fabricate a multilayer golf ball having a soft mantle layer to overcome the conventional two-piece ball. The Examiner further stated that Harris et al. also makes it clear that golf ball manufacturers introduced multilayer golf balls with multiple intermediate or mantle layers in an effort to overcome the undesirable hard "feel" aspect of two-piece balls, therefore it would have been obvious in view of Cavallaro '191 and/or Cavallaro '678 and/or Harris to one having ordinary skill in the art at the time of the invention to incorporate a mantle layer into Sullivan's invention for a softer "feel" of the golf ball. The Examiner continued that regarding claims 2 to 6, Cavallaro '191 discloses a mantle layer of thermoset materials with a mantle thickness of 0.025 to 0.125 inches, and a styrene-butadiene material and thermoplastic material of polybutylene terephthalate. The Examiner concluded that

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Applicant should note that the type of fillers in the mantle layer is a design choice since the selection of fillers is determined by filler cost, specific gravity, and polymer dispersity.

Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness. Sullivan discloses a two piece golf ball comprising a core and a cover, and the cover is preferably a thick cover (see column 4, lines 26 to 28, which states that the "cover is preferably sized to be larger than conventional diameters"). As stated by the Examiner, Sullivan does not disclose a mantle layer. Cavallaro '191 discloses a multilayer golf ball having a core, a mantle and a cover, wherein the mantle layer has a particular flexural modulus and tensile modulus in order to make it feel soft.

Applicants respectfully submit that there is no teaching or suggestion in Cavallaro '191 or Sullivan to motivate one skilled in the art to add a mantle to the golf ball of Sullivan. One skilled in the art would not be motivated to add a mantle layer to the golf ball of Sullivan because Sullivan specifically teaches a two piece golf ball having a large core and a larger, thicker cover, and it is the combination of the soft core and thicker cover that provides the good feel and lower spin in Sullivan. Applicants respectfully submit that Sullivan teaches away from adding another layer by providing a soft core for the soft feel and the thicker cover, and a resulting golf ball having good feel and reduced spin. Applicants respectfully submit that one skilled in the art would not be motivated by Cavallaro '191 to add a mantle, specifically the mantle of Cavallaro '191, to Sullivan because the addition of the mantle of Cavallaro '191 increases the spin rate (see Tables II and III, where the spin rate of the golf balls of the invention is higher than that of commercial balls). The focus of Sullivan is to decrease the spin rate, and Sullivan's combination of core and cover does this, as shown in Table III.

Even if there was some teaching or suggestion to combine Sullivan and Cavallaro '191, which, as discussed above, Applicants submit there is not, Cavallaro '191 does not disclose a mantle comprising a polymeric material having a reinforcing material dispersed throughout the polymeric material. Therefore, the addition of Cavallaro '191 does not cure the fundamental deficiency of Sullivan, that is, Sullivan does not disclose a mantle, or a mantle comprising a polymeric material having a reinforcing material dispersed throughout the polymeric material. The addition of Cavallaro '191 would only provide a mantle layer,

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but not a mantle layer with a reinforcing material. Furthermore, neither Sullivan nor Cavallaro 191, either alone or in combination, disclose a core having a core component and a mantle layer wherein the combined core component and mantle layer has a Riehle compression of at least 75. The core of Sullivan, which does not comprise a core component and a mantle layer, has a Riehle compression of about 75 to 115, but Sullivan does not disclose a core which includes a core component and a mantle, wherein the core comprising the core component and mantle have a Riehle compression at least about 75. Even if a mantle layer was added to Sullivan, the core and mantle layer combination would not necessarily have a Riehle compression of at least 75.

Applicants respectfully submit that the addition of either or both Cavallaro '678 and/or Harris et al. also do not cure the defect in Sullivan because neither Cavallaro '678 nor Harris et al. disclose the mantle layer having the claimed properties. Applicants respectfully submit that even if the type of filler in the mantle is a design choice as stated by the Examiner, which Applicants respectfully disagree with, the Examiner has not shown the motivation or suggestion to add the filler or reinforcing material to the mantle.

Claims 2 to 6 and 8 to 18 depend, or ultimately depend, from claim 1, which Applicants submit is not obvious over Sullivan in view of Cavallaro '191, Cavallaro '678 and Harris et al. for the reasons just discussed, therefore, claims 2 to 6 and 8 to 18 are also not obvious over Sullivan in view of Cavallaro '191, Cavallaro '678 and Harris et al.

For at least these reasons, Applicants respectfully submit that claims 1 to 6 and 8 to 18 are not obvious under 35 U.S.C. § 103(a) over Sullivan in view of Cavallaro '191, Cavallaro '678 and Harris et al. Applicants therefore respectfully request that the rejection of claims 1 to 6 and 8 to 18 under 35 U.S.C. § 103(a) as obvious over Sullivan in view of Cavallaro '191, Cavallaro '678 and/or Harris et al. be reconsidered and withdrawn.

Claims 7 and 19 to 30 were rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (US 5,820,489) in view of Cavallaro (US 5,688,191), Cavallaro (US 5,810,678) and Harris et al. (5,856,388) as applied in claim 1, and further in view of Shama (US 4,848,770), Schenk (4,085,937) and Boehm et al. (US 5,683,312). The Examiner stated that with respect to claims 7, 19 to 22, 28 and 29, Sullivan and Cavallaro disclose the claimed invention except a vitreous or glassy mantle layer but Sullivan does

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disclose the use of fillers in the core formulation. The Examiner further stated that Shama teaches a mantle layer with a filler to control the weight of the finished golf ball, provide compression, and cut resistance to the golf ball, and it is also known in the art that filler provides reinforcement of the golf ball. The Examiner further stated that Schenk teaches the use of glass microspheres in the formulation to provide cut resistance and control the weight of the golf ball, therefore it would have been obvious in view of Shama and Schenk to one having ordinary skill in the art to incorporate the filler of Shama with specific filler types of silica and glass microspheres of Schenk to control the weight, improve compression, and cut resistance as taught by Shama and Schenk. The Examiner further stated that claims 23 to 27 recite limitations similar to claims 1, 10 and 16 to 18, therefore claims 23 to 27 are rejected for the same reasons as applied to claims 1, 10 and 16 to 18 above. The Examiner further stated that with respect to claim 28, the prior art discloses the claimed invention except the use of metal filler in the mantle, but Boehm teaches the use of aluminum, therefore it would have been obvious in view of Shama, Schenk and Boehm to incorporate a metal filler as taught by Boehm in Sullivan and Cavallaro to control weight and provide reinforcement for the golf ball. The Examiner further stated that with respect to claim 29, each metal has its own specific gravity, and the selection of metal and/or alloy and its amount in the formulation must result in a finished golf ball that complies with USGA weight limits. The Examiner concluded that claim 30 recites limitations similar to claim 14, therefore claim 30 is rejected for the same reason as claim 14.

Applicants respectfully submit that the Examiner has failed to make out a *prima facie* case of obviousness. As discussed above, Sullivan discloses a two piece golf ball comprising a core and a cover, and the cover is preferably a thick cover. As stated by the Examiner, Sullivan does not disclose a mantle layer. Cavallaro '191 discloses a multilayer golf ball having a core, a mantle and a cover, but Cavallaro '191 does not disclose a mantle layer comprising a polymeric material with a reinforcing material dispersed in the polymeric material.

As previously discussed, there is no motivation, suggestion or teaching to combine Sullivan and Cavallaro '191 and to add the mantle layer of Cavallaro '191 to the golf ball

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of Sullivan because the mantle layer of Cavallaro '191 increases the spin, and the focus of Sullivan is to decrease the spin with the core and cover combination. Even if the mantle of Cavallaro '191 was added to the golf ball of Sullivan, Applicants' golf ball having a mantle layer comprising a polymeric material with a reinforcing material dispersed in the polymeric material would not be disclosed, wherein the combination of the core and mantle have a Riehle compression of at least 75.

Since there is no motivation, suggestion or teaching to combine Cavallaro '191 with Sullivan, the addition of additional references, such as Shama, Schenk and/or Boehm does not remedy this defect. Sullivan, as previously stated, is a two piece ball with specific core and cover features. There is no motivation at all to add a mantle to the golf ball of Sullivan to produce a golf ball having a core including a core component and a vitreous mantle (claim 19) or a core having an interior core component and a mantle layer including at least one metal (claim 28).

As stated by the Examiner, Sullivan discloses fillers in the core, not in a mantle layer. Applicants respectfully submit that the Examiner has mischaracterized the teachings of Sullivan because although Sullivan does disclose the use of fillers in a core, Sullivan does not disclose the use of fillers of any type in a mantle since Sullivan does not even disclose a mantle layer at all.

Claim 7 depends from claim 1, which, as discussed above, Applicants respectfully submit is not obvious over Sullivan in view of Cavallaro '191, therefore claim 7 is also not obvious over Sullivan in view of Cavallaro '191. Claims 20 to 27 and 29 to 30 depend, or ultimately depend, from claims 19 and 28 respectively, which Applicants submit are not obvious over Sullivan in view of Cavallaro '191, Cavallaro '678 and Harris et al., further in view of Shama, Schenk and Boehm, for the reasons just discussed, therefore, claims 20 to 27 and 29 to 30 are also not obvious over Sullivan in view of Cavallaro '191, Cavallaro '678 and Harris et al., further in view of Shama, Schenk and Boehm.

For at least these reasons, Applicants respectfully submit that claims 7 and 19 to 30 are not obvious under 35 U.S.C. § 103(a) over Sullivan in view of Cavallaro '191, Cavallaro '678 and Harris et al., further in view of Shama, Schenk and Boehm. Applicants therefore respectfully request that the rejection of claims 7 and 19 to 30 under 35 U.S.C. § 103(a) as

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obvious over Sullivan in view of Cavallaro '191, Cavallaro '678 and Harris et al, further in view of Shamä, Schenk and Boehm, be reconsidered and withdrawn.

The Examiner is invited to telephone Applicants' attorney if it is deemed that a telephone conversation will hasten prosecution of the application.

CONCLUSION

Applicants respectfully request reconsideration and allowance of each of the presently rejected claims, claims 1 to 30. Applicants respectfully request allowance of claims 1 to 30, the claims currently pending.

Respectfully submitted,

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